~~XIV~~
~~A197~~
~~V.35 #~~
~~V.38 #~~

0497
.2
75

COMPOSITAE NEWSLETTER

Number Two December 1975

Tod F. Stuessy, Editor, Department of Botany, Ohio State University, 1735 Neil Avenue, Columbus, Ohio 43210, U.S.A.

EDITORIAL

Beginning with this second number of the Newsletter, an additional category of information has been included: RECENT LITERATURE (see p. 6). At the meetings in Reading, Dr. H. W. Lack (Berlin) suggested the inclusion of current references on Compositae. Mr. C. Jeffrey has aided this cause by sending monthly supplements from the Kew current awareness list for the Newsletter. Contained within this issue are references on the Compositae from January through September of 1975.

A few comments on the format of the references are believed helpful. The symbols (En), (Fr), etc., indicate that a summary in another language is provided. The numbers at the lower left of each citation refer to a geographical code as follows: (0) known in cultivation; (1) Europe and North Africa (including Iceland, east to the Urals); (2) temperate Asia (including Egypt, Arabia, Asia Minor, Caucasas); (3) North America (including Greenland); (4) Central and South America (including Mexico, West Indies); (5) tropical and South Africa (including Madagascar); (6) tropical Asia and Pacific (including Hawaii); (7) Australia and New Zealand (including Tasmania).

ARTICLE

TYPES OF ASTERACEAE AT THE PHILADELPHIA ACADEMY OF NATURAL SCIENCES (PH)

James A. Mears

Department of Botany, Academy of Natural Sciences, Nineteenth and the Parkway, Philadelphia, Pennsylvania 19103, U.S.A.

Under this title we will list the Asteraceae now segregated from the general herbarium into the type collection at the Academy of Natural Sciences in Philadelphia. The purpose is to focus the professional community's attention and use onto this collection of more than 40,000 types (including cryptogams). It has been my experience that less than 35% of all types were segregated before this study and that most of the types of names published subsequent to the distributions of exsiccatae are yet unsegregated. The palearctic material has rarely been annotated.

LIBRARY
NEW YORK
BOTANICAL
GARDEN

Part I.

Segregated Types and Selected Authentic Material of the Lactuceae.

Apogon lyratum Nutt., A. heterophylla Nutt., A. humilis Nutt.

Barckhausia albida var. gracilis Sennen, B. goddardiana Nutt., B. grandiflora Nutt.

Calais cyclocarpha Gray, C. macrochaeta Gray; Calodonta azorica Nutt.; Calycoseris wrightii Gray; Chaetadelpha wheeleri Gray; Crepidium runcinatum Nutt.; Crepis acuminata Nutt., C. dahotana Nutt., C. lithophylla Nutt., C. pleurocarpa Gray; Cynthia griffithii Nutt., C. lyrata Nutt.

Erythremia grandiflora Nutt.; Eunochis deltifolius Raf.

Galathenium salicifolium Nutt.

Hieracium bangii Rusby, H. barbatum Nutt., H. carneum Greene, H. erythrospermum Greene ex Gray, H. fasciculatum Pursh, H. jaliscense Robins. & Greenm., H. mapirense Britton, H. megalocephalon Nash, H. paletaranum Sleumer, H. pringlei Gray, H. transvaalense Volkens; Hypochoeris glabra var. boscoi Sennen

Krigia caroliniana Nutt., K. occidentalis Nutt.

Lactuca angulata Raf., L. brachyrhyncha Greenm., L. canadensis var. latifolia f. villicaulis Fernald, L. floridana f. leucantha Fernald, L. formosana Maxim., L. forsan Wilms, L. hirsuta Muhlenberg, L. integrifolium Nutt., L. oldhami Maxim., L. terrae-novae Fernald; Lapsana intermedia var. glandulosa Freyn & Sintenis; Leontodon gaussensis Sennen, L. widderi var. latifolius Sennen; Leucoseris saxatilis Nutt.; Lygodesmia aphylla var. texana Gray, L. rostrata Gray, L. spinosa Nutt.

Macrorhynchus heterophyllus Nutt., M. purpureus Gray; Malacomeris incanus Nutt.; Malacothrix rusbyi Greene; Microseris indivisa Greene, M. parishii Greene; Mulgedium ludovicianum Nutt.

Picris kamschatica Ledebour; Prenanthes aphylla Nutt., P. exigua Gray, P. juncea Pursh, P. miamiensis Riddell, P. nana Nutt., P. opicrina Raf., P. serpentaria f. simplicifolia Fernald; Ptilophora major var. laciniata Gray

Rafinesquia californicus Nutt., R. neomexicana Gray; Reichardia porphyrochrysa Freyn & Sintenis.

Scorzonella laciniata Nutt., S. lepidota Heller; Scorzonera pontica Hausskn. & Bornm., S. praticola Bornm. forma; Sonchus heterophyllus Nutt., S. tenuifolius Nutt.; Stephanomeria minor Nutt., S. runcinata Nutt., S. thurberi Gray, S. tomentosa Greene, S. wrightii Gray; Stylopappus grandiflorus Nutt., S. laciniatus Nutt.

Taraxacum aequilobum Dahlst., T. ambigens Fernald, T. ambigens var. fultior Fernald, T. angustisquamum Dahlst., T. croceum Dahlst., T. decorifolium Haglund, T. fasciatum Dahlst., T. hirtellum Dahlst., T. involucratum Dahlst., T. latum var. abscurans Dahlst., T. laurentianum Fernald, T. limbatum Dahlst., T. mimulum Dahlst., T. maurophyllum Dahlst., T. multisectum Sennen & Gonzalo, T. oblanceolatum Nelson, T. patens Dahlst., T. pholidocarpum Dahlst., T. praeradians Dahlst., T. remotijugum Dahlst., T. scotolepis Dahlst., T. stenoschistum Dahlst.; Tragopogon junceus Wallich; Troximon chilense Gray, T. cuspidatum Pursh, T. glaucum Nutt., T. gracilens Gray, T. parviflorum Nutt., T. roseum Nutt.

Uropappus grandiflorus Nutt., U. heterophyllus Nutt.

BOOK REVIEW

Sesquiterpene Lactones: Chemistry, NMR and Plant Distribution.
H. Yoshioka, T. J. Mabry and B. N. Timmermann. University of Tokyo Press, 1973.
xii + 544 pp., $43.00. Ordering sources: Univ. Tokyo Press, 7-3-1 Hongo,
Bunkyo-ku, Tokyo, 113-91, Japan; Yurinsha Ltd., P.O. Box 63, Hongo Post office,
Tokyo, Japan; ISBS Inc., P.O. Box 4347, Portland, Oregon 97208, U.S.A.

This book consists of two parts. Part I is mainly concerned with the chemical reactions typical of the different structural types of sesquiterpene lactones. Also, some selected topics of the NMR spectroscopy of sesquiterpene lactones, as well as distribution and infraspecific variation of these compounds in Ambrosia are discussed in detail. Part II is introduced by a tabulated natural distribution of sesquiterpene lactones in different plant species, predominantly belonging to the Compositae. For nearly 400 compounds, data sheets include the structural formula, plant sources and literature references. For about 300 of these compounds, the data sheets also contain the 60 MHz NMR spectra plus the tabulation of the chemical shifts with signal assignments. Also, an appendix containing an alphabetical index by skeletal classes of sesquiterpene lactones assists in finding data sheets rapidly on a particular compound.

It is obvious that this book was written with the intent to provide all necessary information to assist laboratory work on sesquiterpene lactones. Since NMR spectroscopy is one of the major tools in the structure elucidation of the different types of sesquiterpene lactones, the wealth of NMR spectra of known compounds in this book is of great assistance in the structural work on new compounds. In our laboratory, the book is in constant use by the students and myself. In general, this new book should attract the interest of a large group of scientists, in particular, phytochemists and pharmacologists, and, last but not least, taxonomists who are interested in the use of chemical data in the systematics of the Compositae.-- Nikolaus H. Fischer, Department of Chemistry, Louisiana State University, Baton Rouge, Louisiana 70803, U.S.A.

Meetings and Other Timely Events

The international symposium on The Biology and Chemistry of the Compositae was held in Reading, England, 14-18 July. The meeting was very well attended and was definitely international by representation. The conference facilities were excellent, although separated by some walking distance from the dormitories. The accomodations were fine, and the lounge (with bar) provided an especially good focus for informal after-dinner discussions. The comfortable surroundings, smooth-running program (a tribute to Drs. Heywood and Harborne and Mrs. Abigail Gillette), and reasonable size of the group (quite a relief from the Leningrad Congress) all contributed to the success of the meeting.

And very successful it was, at least for the systematists. The program basically was systematically oriented, with a discussion of one or several tribes each day. The report on the chemistry of each tribe was followed immediately by a commentary on the systematics. Because of this framework, the chemists tended to slant their comments toward the utility of chemistry in classification of the same tribe. In other words, the comments on chemistry took a back seat to the discussions of classification based primarily on morphology. There were few in-depth reports on trends of chemical evolution within the various tribes. Likewise, detailed discussions of mechanisms or biosynthetic studies were nearly absent.

What resulted from these systematic surveys of each tribe was a much clearer understanding of the modes of character variation for each major group. At the same time, it was also realized that numerous peripheral genera could no longer be placed with certainty in any tribe. These "orphans" are now seeking homes in existing tribes, or they may find their way to new tribes. In fact, a willingness emerged from the conference to tolerate (or at least consider) smaller segregate tribes (e.g., Liabeae, three tribes from the old Cynareae, etc.) in addition to the traditional thirteen. The attempted dismantling of the old Helenieae (B. L. Turner and Mike Powell) met with some resistance (especially from Bertil Nordenstam who reported on the Senecioneae); the suggestion of setting up a new tribe to handle some of these senecionoid genera was discussed informally. For the final symposium publication, which will fill two volumes, a list of accepted genera in each tribe and in the entire family will be provided. This will be the most recent and complete list since that of Dalla Torre & Harms.

General lectures on the systematics and evolution of the family were given daily, and they proved to be very interesting. Particularly good summaries were given on the cytology (Otto Solbrig), palynology (John Skvarla), and developmental anatomy (G.L. Stebbins). No definite statements resulted, however, on the important and nagging question of the familial relationships of the Compositae. John Skvarla presented interesting pollen data, but they were inconclusive. The most startling and certainly unorthodox paper was that of B. L. Turner who speculated that the present-day distribution of the tribes of the family has resulted principally from the effects of continental drift. This view necessitates an origin of the Compositae during the Mesozoic, and Professor Turner mentioned several fossils (both mega- and micro-) that may suggest an older origin for the family than the currently accepted beginnings in late Oligocene. This paper generated lively discussion.

As an important side light, it should be mentioned that during the Symposium the first Tate and Lyle Phytochemistry Award was presented to professor Donald Boulter (Durham) in recognition of his many outstanding contributions including recent innovative studies on cytochrome c.

The Reading Meeting, therefore, was a definite success, and we can only await anxiously the publication of the symposium volumes which should be ready within a year or so.--Editor.

NEWS FROM INDIVIDUALS AND INSTITUTIONS

From Prof. H. Merxmüller, Botanische Staatssammlung München, comes a notice of colleagues and students working on various projects: Prof. Grau (Institut für Systematische Botanik), Astereae; Dr. H. Roessler (Botanische Staatssammlung), Arctotideae-Gorteriinae; Miss A. Rommel, Amellus and Chrysocoma (Astereae); and Mr. G. Kroner, Athrixia and Printzia (Inuleae).

At Kew, there are three current research topics in Compositae. C. Jeffrey, P. Halliday and M. Wilmot-Dear are studying generic and sectional limits in Senecio and allied genera; with the assistance of S. W. Jones, the first paper on this topic is being prepared for publication. C. Jeffrey and F. G. Davies are revising the Vernonieae for 'Flora of Tropical East Africa', working in close co-operation with H. Wild and G. Pope (Salisbury, Rhodesia), who are revising the tribe for 'Flora Zambesiaca' (including a detailed study of the taxonomic significance of trichome types). F. G. Davies is revising the genus Gynura.

Dr. Josephine Koster, Oegstgeest, Netherlands, writes concerning her recent studies with the New Guinea Compositae. The material comes from the many expeditions made on that island, in the last years mostly in the eastern part. So far, the following tribes have been published: Vernonieae, Eupatorieae, Astereae, Inuleae, Helenieae, Anthemideae. The manuscript of the Cichorieae has been finished. The Heliantheae, most of which are introduced in New Guinea, have been completed. Several genera would make an interesting subject for a monograph. They are: Olearia (Astereae) about 140 endemic species in Australia, Tasmania, Lord Howe Island, New Zealand, New Guinea(the shape of the much magnified hairs on the underside of the leaves being characteristically different in the various species); Tetramolopium (Inuleae), about 33 species in Hawaiian Islands and New Guinea; Anaphalis (Inuleae), about 100 species mostly in Asia, several in America; Gnaphalium (Inuleae), about 200 species, almost cosmopolitan; Cotula (Anthemideae), about 80 species in the southern hemisphere.

REQUESTS FOR MATERIAL

Mr. Roy L. Headlee, a student of Dr. Loran C. Anderson, is currently pursuing a doctoral study on the comparative morphology and anatomy of Compositae seedlings. For such a vast survey to be meaningful, good representation from each tribe is needed. Any viable seed from positively identified species (preferably vouchered) would be greatly appreciated; seed may be sent to either person c/o Dept. of Biological Sciences, Florida State University, Tallahassee, Florida 32306, U.S.A. (Preliminary data suggest some interesting phylogenetic and comparative information is to be had from such a study.)

GENERAL

Belkina, K.V.
Stroenie apertur pȳl'tsevȳkh zeren nekotorȳkh vidov sem
Asteraceae Dum. florȳ Yakutii.
(Seed [pollen] grain aperture structure in some species of the Asteraceae family from the flora of Yakutia). Bot. Zhurn.,
1-7 60(4):514-516 (1975).

Cabrera, A.L.
Tres Compositae nuevas de Minas Gerais (Brasil). Bol.
Mus. Bot. Mun. (Curitiba), no. 15.
4 7 p. (1974) - Illustrations.

Cabrera, A.L.
Nota sobre cinco Compositae de la Republica Argentina. Bol. Soc.
Argent. Bot., 16(3):255-260 (1975)-
4 (En); illustrations.

Cuatrecasas, J.
Algo sobre Compositae en la flora de Colombia. In Sociedad Botanica de Mexico. Memorias de symposia.
1 Congreso Latinoamericano y Mexicano de Botanica, Mexico:
4 157-166 (1972) - (En).

D'Arcy, W.G.
New names and species of neotropical plants: Compositae.
1-7 Phytologia, 30(1):5-6 (1975).

Davis, P.H., comp.
Materials for a flora of Turkey:
31. Compositae: 2. Notes Roy.
Bot. Gard. Edinburgh, 33(3):409-435 (1975). Contributions by:
Chamberlain, D.F., Danin, A., Davis, P.H., Grierson, A.J.C., Hedge, I.C., Holub, J., Enayet Hossain, A.B.M., Huber-Morath, A., Jeffrey, C., Kästner, A., Kupicha, F.K., Lack, H.-W., Lamond, J.M., Matthews, V., Meusel, H., Panis, B.S., Sell, P.D., Wagenitz, G., West, C. and
2 Yavin, Z.

Hilliard, O.M. and Burtt, B.L.
Notes on some plants of Southern Africa chiefly from Natal: 4.
Notes Roy. Bot. Gard. Edinburgh,
5 34(1):73-100 (1975). Compositae.

King, R.M. and Krantz, V.E.
Ultraviolet reflectance patterns in the Asteraceae: I. Local and cultivated species. Phytologia,
3 31(1):66-114 (1975) - Illustrations.

Mehra, P.N. and Remanandan, P.
Cytological investigations on the Indian Compositae: 2. Asterea
Heliantheae, Helenieae and Anthemideae. Caryologia, 27(3):255-284
6 (1974) - Chromosome numbers.

Nash, D.J.
Studies in American plants: 6.
4 Fieldiana, Bot., 36(9):73-75 (1974).

Smith, B.N. and Turner, B.L.
Distribution of Kranz syndrome among Asteraceae. Amer. J. Bot.,
1-7 62(5):541-545 (1975).

Tiagi, Y.D. and Singh, B.P.
A contribution to the floral anatomy of the family Compositae.
In Puri, V., Murty, Y.S., Gupta, P.K. and Banerji, D., eds. Biology of the land plants: 9-25 (1974) -
6 Illustrations.

Urbatsch, L.E.
First chromosome number reports for some Compositae. Southwest.
3 Nat., 20(2):283-285 (1975).

Jain, N.K.
Studies in two ecotypes of
Vernonia patula (Dryand) Merrill:
1. Morphology and physiology. J.
Indian Bot. Soc., 53(1-2):88-96
6 (1974) - Illustrations.

King, B.L. and Jones, S.B.
The Vernonia lindheimeri complex
(Compositae). Brittonia, 27(1):74-
3,4 86(1975) - Dot map; key.

Mabry, T.J., Abdel-Baset, Z.,
Padolina, W.G. and Jones, S.B.
Systematic implications of
flavonoids and sesquiterpene
lactones in species of Vernonia.
Biochem. Syst. Ecol., 2(3-4):
2-7 185-192 (1975).

EUPATORIEAE

Ellis, J.L. and Karthikeyan, S.
Notes on some interesting
plants from south India: 2.
J. Bombay Nat. Hist. Soc., 70(3):
594-599 (1973 publ. 1974).
6 Mikania cordata.

Grashoff, J.L.
Novelties in Stevia (Compositae:
Eupatorieae). Brittonia, 26(4):
3,4 347-384 (1974) - Illustrations.

Grashoff, J.L.
Metastevia (Compositae:
Eupatorieae) a new genus from
Mexico. Brittonia, 27(1):69-73
4 (1975) - Illustration.

Holmes, W.C. and McDaniel, S.
Notes on Mikania (Compositae).
4-6 Phytologia, 31(3):273-278 (1975).

King, R.M. and Robinson, H.
Studies in the Eupatorieae
(Asteraceae): 116. A new species
of Neomirandea. Phytologia,
27(4):245-251 (1973) - Illustra-
4 tions.

King, R.M. and Robinson, H.
Studies in the Eupatorieae
(Asteraceae): 127. Additions to
the American and Pacific Adenostem-
matinae Adenostemma, Gymnocoronis
and Sciadocephala. Phytologia,
4,6 29(1):1-20 (1974) - Dot map; keys.

King, R.M. and Robinson, H.
Studies in the Eupatorieae
(Asteraceae): 131. A new genus,
Guevaria. Phytologia, 29(3):
4 257-263 (1974) - Illustrations.

King, R.M. and Robinson, H.
Studies in the Eupatorieae
(Asteraceae): 132. The genus
Phalacraea. Phytologia, 29(3):
251-256 (1974) - Illustrations;
4 key.

King, R.M. and Robinson, H.
Studies in the Eupatorieae
(Asteraceae): 133. A new genus
Piqueriella. Phytologia, 29(3):
4 264-266 (1974) - Illustration.

King, R.M. and Robinson, H.
Studies in the Eupatorieae
(Asteraceae): 134. A new species
of Sciadocephala from Panama.
Phytologia, 29(5):343-346 (1975) -
4 Illustrations.

King, R.M. and Robinson, H.
Studies in the Eupatorieae
(Asteraceae): 135. A new species
of Ageratina from Panama. Phyto-
logia, 29(5):347-350 (1975) -
4 Illustrations.

King, R.M. and Robinson, H.
Studies in the Eupatorieae
(Asteraceae): 136. Four new
species of Neomirandea. Phytologia
29(5):351-361 (1975) - Illustra-
4 tions.

King, R.M. and Robinson, H.
Studies in the Eupatorieae
(Asteraceae): 137. Two new
species of Neomirandea. Phytologia
4 30(1):9-14 (1975) - Illustrations.

King, R.M. and Robinson, H.
Studies in the Eupatorieae
(Asteraceae): 138. A new genus
Critoniella. Phytologia, 30(4):
4 284-285 (1975).

King, R.M. and Robinson, H.
Studies in the Eupatorieae
(Asteraceae): 139. A new genus
Aristeguietia. Phytologia,
4 30(3):217-220 (1975).

King, R.M. and Robinson, H.
Studies in the Eupatorieae
(Asteraceae): 140. A new genus
Grosvenoria. Phytologia, 30(3):
4 221-222 (1975).

King, R.M. and Robinson, H.
Studies in the Eupatorieae
(Asteraceae): 141. A new genus
Asplundianthus. Phytologia,
30(3):223-228 (1975) - Illustra-
4 tions.

King, R.M. and Robinson, H.
Studies in the Eupatorieae
(Asteraceae): 142. A new genus,
Badilloa. Phytologia, 30(3):229-
4 234 (1975) - Illustrations.

King, R.M. and Robinson, H.
Studies in the Eupatorieae
(Asteraceae):143. A new genus
Austrocritonia. Phytologia,
4 31(1):115-117 (1975) - Key.

King, R.M. and Robinson, H.
Studies in the Eupatorieae
(Asteraceae):144. A new genus
Viereckia. Phytologia, 31(1):
4 118-121 (1975) - Illustrations.

King, R.M. and Robinson, H.
Studies in the Eupatorieae
(Asteraceae): 145. A new species
of Bartlettina. Phytologia,
4 31(1):62-65 (1975) - Illustrations.

Sullivan, V.I.
Pollen and pollination of the
genus Eupatorium (Compositae).
Canad. J. Bot., 53(6):582-589
1-7 (1975) - (Fr).

Tutin, T.G.
Flora Europaea: notulae
systematicae ad floram Europaeam
spectantes: no. 16. Compositae
(238) Adenostyles alpina subsp.
briquetii (Gamisans) Tutin, stat.
nov. Bot. J. Linn. Soc., 70(1):
1 18 (1975).

ASTEREAE

Anderson, L.C. and Creech, J.B.
Comparative leaf anatomy of
Solidago and related Asteraceae.
1-4 Amer. J. Bot., 62(5):486-493 (1975).

Beaudry, J.R.
Solidago shinnersii (Beaudry)
stat. and comb. nov., une nouvelle
espèce du complexe du S. gigantea.
Nat. Canad., 101(6):931-932 (1974)-
(En); illustrations; chromosome
3 numbers.

Berner, L.
Note sur Aster squamatus (Spreng.)
Hieron 1826. Monde Pl., no. 379:5
1,3 (1973).

Degener, O. and Degener, I.
Prodromus of Galatella and
Neowimmeria. [Volcano, Hawaii,
6 1974]. 13 p. - Illustrations.

Dennis, R. and Jackson, B.P.
Morphology and anatomy of the
aerial parts of Psiadia salvii-
folia Baker from Madagascar. Bot.
J. Linn. Soc. 69(4):261-275
5 (1974 publ. 1975) - Illustrations.

Edorov'eva, E.N.
K sistematike dal'nevostochnȳkh
vidov roda Heteropappus Less. (Sem.
Compositae). Byull. Glavn. Bot.
2 Sada (Moscow), 94:51-53 (1974).

Guédès, M. and Jovet, P.
Conyza albida Willd ex Sprengel,
the correct name for "C. altissima"
Naudin ex Debeaux (C. naudinii
Bonnet) Taxon, 24(2-3):393-394
4-5 (1975).

Howe, T.D.
The female gametophyte of three
species of Grindelia and of
Prionopsis ciliata (Compositae).
3 Amer. J. Bot., 62(3):273-279 (1975).

Husson, P.
Aster squamatus (Spreng.)
Hieron: nouvelle de la région
Toulousaine. Monde Pl., no. 380:8
1 (1974).

Jones, A.G.
Aster ericoides L. east of the
Mississippi river. Amer. Midl.
Nat., 92(2):466-475 (1974) -
3 Illustrations, dot map.

Jones, A.G.
The status of Aster adsurgens
E.L. Greene. Taxon, 24(2-3):357-
3 360 (1975) - Illustrations.

Moldenke, H.N.
Notes on new and noteworthy
plants: 72. Phytologia, 29(3):
3 192-193 (1974). Aster.

Ruffin, J.
A taxonomic re-evaluation of the
genera Amphiachyris, Amphipappus,
Greenella, Gutierrezia, Gymnosperma,
Thurovia and Xanthocephalum
(Compositae). Sida, 5(5):301-333
3,4 (1974) - Chromosome numbers; key.

Ruffin, J.
Wood anatomy of Amphiachyris,
Amphipappus, Thurovia, Gymnosperma
and the Xanthocephalum complex.
3,4 Sida, 5(5):341-352 (1974).

Semple, J.G. and Averett, J.E.
Flavonoid variation in
Xanthisma texanum: infrapopulation
and interpopulation variation.
Biochem. Syst. Ecol., 3(1):11-14
3 (1975) - Illustration, dot maps.

Singh, B.D.
The phylogenetic relationship
between Haplopappus gracilis and
H. ravenii: evidence from cell
suspension culture. Caryologia,
28(1):39-43 (1975) - Chromosome
3 numbers.

Stucky, J. and Jackson, R.C.
DNA content of seven species
of Astereae and its significance
to theories of chromosome evolution
in the tribe. Amer. J. Bot.,
62(5):509-518 (1975) - Chromosome
1-7 numbers.

Turner, B.L.
Two new gypsophilic species of
Erigeron (Asteraceae) from northern
Mexico. Wrightia, 5(5):116-119
(1975) - Illustrations; chromosome
4 numbers.

Turner, B.L., Bacon, J. and
Wendt, T. Chromosomes and
phyletic position of Aster sonorae
Gray (Asteraceae - sect.
Oxytripolium). Southwest. Nat.,
19(4):361-364 (1975) - Chromosome
3,4 numbers.

Webb, D.A.
Flora Europaea: notulae
systematicae ad floram Europaeam
spectantes: no. 16. Compositae
(239) Bellis annua subsp.
vandasii (Velen.) D.A. Webb, stat.
nov. Bot. J. Linn. Soc., 70(1):18
1 (1975).

INULEAE

Chen, F.-H. and Hu, C.-M.
A report of some new species of
the genus Carpesium from western
China. Acta Phytotax. Sin., 12(4):
2 497-504 (1974) -(Ch) illustrations.

Cunliff, K.M.
Trees for tomorrow. Trees S.
Afr., 26(1):24-27 (1974) -
Illustrations. Tarchonanthus
5 camphoratus.

INULEAE (continued)

Duvigneaud, J.
Note sur quelques récoltes baléariques de Filago congesta Guss. ex DC. (Asteraceae). Soc. Ech. Pl. Vasc. Eur. Occid. Bassin Médit. II Bull., fasc. no 15:105-109 (1974). 1

Ferrarini, E.
Altre cenosi e stazioni relitte reperite sull'Appennino settentrionale (ad Antennaria carpatica, a Rhododendron ferrugineum, a Salix herbacea, a Saussurea discolor). Webbia, 29(1):105-112 (1974) - (En); illustrations. 1

Grierson, A.J.C.
Critical notes on the Compositae of Ceylon, 2. Ceylon J. Sci. Biol. Sci., 11(1):12-22 (1974) - Illustration. Epaltes, Sphaeranthus etc. 6

Mahler, W.F.
Typification and distribution of the varieties of Gnaphalium helleri Britton (Compositae - Inuleae). Sida, 6(1):30-32(1975) - Dot map; key. 3

Urbanska-Worytkiewicz, K.
L'agamospermie, système de reproduction important dans la spéciation des angiospermes. (Agamospermy important system of reproduction for the speciation of angiosperms). Bull. Soc. Bot. France, 121(9):329-346 (1974 publ. 1975) - (En); chromosome numbers. Antennaria. 1-4, 6-7

Walters, S.M.
Two famous medicinal herbs in 'new' Cambridge localities. Nat. Cambridge, no. 18:16-18 (1975). Inula helenium. 1

HELIANTHEAE

Alva Sagastegui, A.
Nuevos taxa de Verbesina (Compositae) del Peru. Bol. Soc. Argent. Bot., 16(3):261-266 (1975)-(En); illustrations. 4

Bassett, I.J. and Crompton, C.W.
The biology of Canadian weeds: 2. Ambrosia artemisiifolia L. and A. psilostachya DC. Canad. J. Pl. Sci., 55(2):463-476 (1975) - (Fr); illustrations, dot maps. 1-3

Becker, K.M.
New combinations in Wedelia Jacq. (Asteraceae). Phytologia, 31(1):25 (1975). 4

Becker, K.M.
New combination in Lasianthaea DC. Phytologia, 31(3):297 (1975). 4

Bedi, S.J. and Thaker, D.N.
The occurrence of Chrysanthellum indicum DC. in Gujarat State. J. Bombay Nat. Hist. Soc., 70(3): 590-591 (1973 publ. 1974) - Illustration. 6

Beldon, R.
Petite histoire du Dahlia. Jard. France, no. 8-9:5-6 (1975) - Illustrations. 4

Brummitt, R.K.
Sigesbeckia jorullensis H., B. & K. - the correct name for S. cordifolia H., B. & K. Watsonia, 10(3):285-286 (1975). 1-4

Buker, W.E.
Three notable western Pennsylvania Composites. Castanea, 40(1): 86-87 (1975). Picris hieracioides, Ratibida pinnata, Eclipta alba. 3

Cuatrecasas, J.
Miscellaneous notes on neotropical flora: 6. Phytologia, 29(5):369-385 (1975). Espeletia, Senecio. 4

Eliasson, U.
Studies in Galápagos plants: 14. The genus Scalesia Arn. Op. Bot., no. 36. 117 p. (1974) - Illustrations, map; chromosome numbers; keys.
4

Fay, J.J.
New combinations in Perymenium and Oteiza (Asteraceae - Heliantheae). Phytologia, 31(1):16-17 (1975).
4

Hicks, A.J.
Apomixis in Xanthium? Watsonia, 10(4):414-415 (1975).
1-7

Kral, R.
Rudbeckia auriculata (Perdue) Kral, a species distinct from R. fulgida Ait. Rhodora, 77(809): 44-52 (1975) - Illustrations.
3

Manilal, K.S.
A compound capitulum in Melampodium L. (Compositae). Bot. J. Linn. Soc., 70(1):71-75 (1975).
3,4

McMillan, C.
The Xanthium strumarium complex in Australia. Austral. J. Bot., 23(1):173-192 (1975) - Illustrations, dot map.
7

McMillan, C.
Systematic implications of the peroxidase isoenzymes in the Xanthium strumarium complexes. Biochem. Syst. Ecol., 3(1):7-9 (1975).
1-7

McMillan, C., Chavez, P.I., Plettman, S.G. and Mabry, T.J.
Systematic implications of the sesquiterpene lactones in the "strumarium" morphological complex (Xanthium strumarium, Asteraceae) of Europe, Asia and Africa. Biochem. Syst. Ecol., 2(3-4):181-184 (1975).
1,2,3,6

McVaugh, R.
Committee for Spermatophyta: conservation of generic names: 18. Proposal 348 [9216] Zexmenia A. Gray (1852) vs. Zexmenia LaLlave & Lexarza (1824), Lasianthaea De Candolle (1836), and Telesia Rafinesque (1837). Taxon, 24(1):245 (1975).
3,4

Misra, S.
Floral morphology of the family Compositae: 5. The seed coat and pericarp in Verbesina encelioides (Cav.) Benth. and HK. f. ex A. Gray. J. Indian Bot. Soc., 51(3-4):332-341 (1972) - Illustrations.
3,4,6

Pandey, D.S.
On the occurrence of Galinsoga ciliata (Rafin.) Blake (Asteraceae) in south India. Bull. Bot. Surv. India, 13(1-2):158 (1971 publ. 1973).
6

Peterson, K.M. and Payne, W.W.
Erratum on the correct name for the appressed-winged variety of Hymenoclea salsola (Compositae: Ambrosieae). Brittonia, 26(4): 397 (1974).
4

Rao, G.V.S. and Kumari, G.R.
New records of plants from south India: 4. Bull. Bot. Surv. India, 13(1-2):155-156 (1971 publ. 1973). Enhydra fluctuans.
2,6

Robinson, H.
Studies in the Heliantheae (Asteraceae): 3. A new species of Schistocarpha. Phytologia, 29(3):247-250 (1974) - Illustrations.
4

Robinson, H.
Studies in the Heliantheae (Asteraceae): 4. A new species of Schistocarpha from Panama. Phytologia, 29(5):339-342 (1975)- Illustrations.
4

Ruiz-Terán, L.
Dos Compuestas nuevas de Los
Andes Venezolanos. Rev. Fac. Farm.
Univ. Los Andes, no. 14:5-20
(1974) - Illustrations. Espeletia,
4 Paragynoxis.

Seaman, F.C.
Hymenoclea platyspina (Asteraceae:
Ambrosieae), a new species from
Baja California. Madroño, 23(3):
4 110-114 (1975) - Illustration.

Simon, C.
Bidens subalternans DC. in
Europa. Bauhinia, 5(2):105-108
1 (1974) - (Ge).

Smith, E.B.
The chromosome numbers of North
American Coreopsis with phyletic
interpretations. Bot. Gaz., 136
3 (1):78-86 (1975).

HELENIEAE

Averett, J.E. and Beaman, W.C.
Chemotaxonomy and flavonoids of
Gaillardia section hollandia.
(Asteraceae-Helenieae). Pl. Syst.
3, 4 Evol., 123(3):237-240 (1975).

Bierner, M.W.
A systematic study of Dugaldia
(Compositae). Brittonia, 26(4):
385-392 (1974) - Chromosome
3, 4 numbers; key.

Bierner, M.W.
The taxa of Helenium in Tennessee.
Castanea, 39(4):346-349 (1974) -
3 Chromosome numbers; key.

Keil, D.J.
Pectis cylindrica (Compositae)
established as a member of the
Texas flora and confirmed as a
distinct species. Southwest. Nat.,
3 20(2):286-287 (1975).

Keil, D.J.
Pectis humifusa new to the flora
of the United States. Rhodora,
3 77(809):145-146 (1975).

Ornduff, R. and Bohm, B.A.
Relationships of Tracyina and
Rigiopappus (Compositae). Madroño,
3 23(1):53-55 (1975).

Ornduff, R., Bohm, B.A. and Saleh,
N.A.M.
Flavonoid races in Lasthenia
(Compositae). Brittonia, 26(4):
411-420 (1974) - Dot map; chromosome
3 numbers.

Turner, B.L. and Morris, M.I.
New taxa of Palafoxia
(Asteraceae: Helenieae). Madroño,
23(2):79-80 (1975) - Chromosome
3, 4 number.

Williams, L.O.
Some Helenioid Compositae from
Central America. Phytologia, 29
4 (4):273-276 (1974).

ANTHEMIDEAE

Fernandes, R.B.
Flora Europaea: notulae
systematicae ad floram Europaeam
spectantes: no. 16. Taxonomic
notes on the genus Anthemis L.
Bot. J. Linn. Soc., 70(1):6-17
1 (1975).

Gajić, M.
Varijabilnost Achillea
ageratifolia (Sibth. et Sm.)
Boiss. - nove forme A. ageratifolia
(Sibth. et Sm.) Boiss.
(Variability of Achillea
ageratifolia (Sibth. et Sm.) Boiss.
- the new forms A. ageratifolia
(Sibth. et Sm.) Boiss.). Glasn.
Prir. Muz. Beogradu, B, 29:5-16
1 (1974) - (En); illustrations; key.

Greger, H.
Laubblatt-Flavonoide und Systematik bei Matricaria und Tripleurospermum (Asteraceae-Anthemideae), (Leaf flavonoids and systematics in Matricaria and Tripleurospermum (Asteraceae-Anthemideae)). Pl. Syst. Evol., 124(1):35-55 (1975) -
1-3 (En).

Huber-Morath, A.
Die türkischen Arten der Gattung Achillea L. Ber. Schweiz. Bot. Ges., 84(2):123-172 (1975) -
1,2 (En); keys.

Koster, J.T.
The Compositae of New Guinea: 4. Additions and corrections to 1, 2
2, and 3. Blumea, 22(2):207-217(1975)
I, Ac; Illustrations; keys. Rhamphogyne,
Ab6; Achillea, Ischnea, Centipeda and
Ce4-7 Abrotanella.

Lavrenko, E.M. and Sumerina, I. Yu.
Materialy̆ k izucheniyu geografii i fitotsenologii rastenii tsentral'noi Azii: 2. Stepnoi maloletnik severnoi chasti tsentralnoi Azii Artemisia pectinata Pall. (Materials on the study of plant geography and phytocoenology of Central Asia: 2. Annual and biennial plant of the steppe Artemisia pectinata Pall. in the northern part of Central Asia). Bot. Zhurn. 59(12):1760-1766 (1974) -
2 Dot map.

Melikyan, A.P. and Muradyan, L.G.
Osnovny̆e napravleniya évolyutsii perikarpiya i spermodermy̆ v podtribe Chrysantheminae (Asteraceae). (The main directions of fruit wall and seed coat evolution in subtribe Chrysantheminae (Asteraceae)). Bot. Zhurn., 60(8):1123-1133 (1975) - (En);
1-7 illustrations.

Nagl, W. and Ehrendorfer, F.
DNA content, heterochromatin, mitotic index and growth in perennial and annual Anthemideä (Asteraceae). Pl. Syst. Evol.,
1,2 123(1):35-54 (1974).

Oswiecinska, M.
Chemotaxonomic investigations of an azulene in Achillea. Herba Pol., 19:207-215 (1973) - Chromosome numbers. Abstr. in Excerpta
1-3 Bot., A, 25(2):111 (1975).

Persson, K.
Biosystematic studies in the Artemisia maritima complex in Europe. Op. Bot., no. 35. 188 p. (1974) - Illustrations, maps, dot
1 maps; chromosome numbers.

Pouzar, Z.
Leucanthemum waldsteinii, the correct name for Leucanthemum rotundifolium. (Leucanthemum waldsteinii, Správné jméno pro Leucanthemum rotundifolium). Preslia, 47(2):158-159 (1975) -
1 (Cz).

Przywara, L.
Badania biosystematyczne nad gatunkiem zbiorowym Leucanthemum vulgare z obszaru Polski. (Biosystematical studies on the collective species Leucanthemum vulgare from Poland). Fragm. Flor. Geobot., 20(3):413-470 (1974) - (En); illustrations; chromosome
1 numbers.

Przywara, L.
Karyological studies on Leucanthemum vulgare s.l. from Poland. Acta Biol. Cracov., Bot., 17(1): 55-73 (1974) - Dot map; chromosome
1 numbers.

Przywara, L.
Embryological studies on Leucanthemum vulgare s.l. Acta Biol. Cracov., Bot., 17(2):207-214 (1974) - Chromosome numbers.

Rauschert, S.
Nomenklatorische Probleme in der Gattung Matricaria L. Folia Geobot.
1-3, Phytotax., 9(3):249-260
6,7 (1974) - (En).

6 Royen, P. van and Lloyd, D. The genus Cotula (Asteraceae) in New Guinea: sertulum papuanum 21. Blumea, 22(2):197-206 (1975) - Illustrations; key.

1 Tutin, T.G. Flora Europaea: notulae systematicae ad floram Europaeam spectantes: no. 16. Compositae (240) Gymnostyles stolonifera (Brot.) Tutin, comb. nov. Bot. J. Linn. Soc., 70(1):18 (1975).

2 Yano, K. Variation in acetylene content of different ecotypes of Artemisia capillaris. Phytochemistry, 14(8): 1783-1784 (1975).

1 Yeo, P.F. Flora Europaea: notulae systematicae ad floram Europaeam spectantes: no. 16. Compositae (242) Santolina chamaecyparissus subsp. insularis (Gennari ex Fiori) Yeo, stat. nov. Bot. J. Linn. Soc., 70(1):18 (1975).

1 Zelený, V. B- Chromosomen bei der Gattung Leucanthemum (Asteraceae) in der Tschechoslowakei. Pl. Syst. Evol., 123(1):55-60 (1974) - (En); chromosome numbers.

SENECIONEAE

1 Allen, D.E. Correct name of inland radiate plants of Senecio vulgaris L. Watsonia, 10(3):285 (1975).

7 Drury, D. G. Illustrated and annotated key to the erechtitoid Senecios in New Zealand (Senecioneae - Compositae) with a description of Senecio diaschides. New Zealand J. Bot., 12(4):513-540 (1974) - Illustrations; key.

1 Hudson, H.J. Plant notes from some Irish counties. Irish Nat. J., 18(7): 222-223 (1975). Senecio erucifolius.

1-3 Hull, P. Selection and hybridization as possible causes of changes in the frequency of alleles controlling capitulum-type in Senecio vulgaris L. Watsonia, 10(4):395-402 (1975) - Map; chromosome numbers.

5 Kidd, W. Othonna schaeferi Muschler ex Dinter. Cact. Succ. J. (U.S.A.), 47(4):161 (1975) - En; illustration.

5 Olorode, O. Meiotic studies on diploid hybrids between Emilia sonchifolia and E. coccinea (Compositae). Cytologia, 38(4):725-729 (1973) - Chromosome numbers.

1, 2 Pohlmann, D. Zwei buntblättrige Goldkolben - Formen. Palmengarten, 39(1):43 (1975) - Illustrations. Ligularia.

4 Puga, L.M.V. de Arnica, planta medicinal mexicana. Bol. Inform. Inst. Bot. (Guadalajara), no. 2:12-13 (1974)- Illustration. Heterotheca inuloides, Arnica montana.

7 Rawlings, G.B. Northland notes: 3. New Zealand J. Bot., 12(4):563-565 (1974). Senecio linearifolius, p. 565.

1 Sapaly, J. A propos de Senecio harveianus MacOwan (S. vimineus Harvey). Monde Pl., no. 381:5 (1975).

1-7 Shields, M.E. A garden under glass. Senecios: part 6. Miscellaneous Senecios. Bull. Afr. Succ. Pl. Soc., 9(6):164-167 (1975) - Illustrations

Shields, M.E.
A garden under glass. Senecios: part 7. Bull. Afr. Succ. Pl. Soc.,
5 10(1):2-5 (1975) - Illustrations.

Simpson, M.J.A.
Senecio bifistulosus Hook. f. - a rare shrub endemic to New Zealand. New Zealand J. Bot., 12(4):567-573
7 (1974) - Illustrations, dot map.

Strother, J.L. and Pilz, G.
Taxonomy of Psathyrotes (Compositae: Senecioneae). Madrono, 23(1):24-40 (1975) - Illustrations, dot maps;
3,4 chromosome numbers; key.

Torre, A.R.
Revisão do género Emiliella S. Moore (Compositae, Senecioneae). Garcia de Orta, Ser. Bot., 2(2): 85-87 (1975) - (En); illustrations;
5 key.

Turner, B.L.
Taxonomy of Haploesthes (Asteraceae - Senecioneae). Wrightia, 5(5):108-115 (1975) - Dot map; chromosome numbers;
3,4 keys.

Vassal, J. and Bonnemort, A.
Nouvelles localités de Senecio harveianus Mac Owan (= S. vimineus Harvey non D.C.) adventice sud-africaine. Monde Pl., no. 379:3
5 (1973).

Weideman, E.
From the Compassberg record book. East. Cape Nat., no. 54:20, 22
5 (1975) - Illustrations. Euryops.

Zardini, E.M.
Una nueva especie del genero Senecio del norte de Patagonia. (A new species of Senecio from north Patagonia). Bol. Soc. Argent. Bot., 16(1-2):109-111 (1974) - (En);
4 illustrations, map; key.

CALENDULEAE

Heyn, C.C., Dagan, O. and Nachman, B.
The annual Calendula species: taxonomy and relationships. Israel J. Bot., 23(4):169-201 (1974 publ. 1975) - Illustrations, map, dot
1,2 map; chromosome numbers; key.

Kapinos, G.E.
Embriologicheskii ocherk Calendula persica C.A. Mey. Byull. Glavn. Bot. Sada (Moscow),
2 96:38-46 (1975 - Illustrations.

Ohle, H.
Beiträge zur Taxonomie und Evolution der Gattung Calendula L.: 3. Revision der marokkanischen perennierenden Sippen unter Berücksichtigung einiger marokkanischer Annueller. Feddes Repert., 86(1-2):1-17 (1975) - (En,Fr); illustrations; chromosome
1 numbers; keys.

ARCTOTEAE

Rourke, J.P.
Dymondia margaretae. A notable ground cover. J. Bot. Soc. S. Afr. 60:30-33 (1974) - Illustrations, coloured illustration, portrait,
5 dot map.

CARDUEAE

Amin, A.
On Echinops hussoni Boiss and E. macrochaetus Fres. Egypt. J. Bot.
2 16(1-3):411-412 (1973 publ. 1974).

Brandes, D.
Vorkommen und Vergesellschaftung von Onopordum acanthium L. in Südostniedersachsen. Göttinger
1 Flor. Rundbr., 9(2):56-59 (1975).

Damboldt, J. and Matthäs, U. Chromosomenzahlen einiger mediterraner und mitteleuropäischer Centaurea species (Asteraceae)). Pl. Syst. Evol., 123(2):107-115 (1975) - (En). 1

Damboldt, J. and Melzheimer, V. Uber einige Centaurea-Arten (Asteraceae) der Athos - Halbinsel. Bot. Jahrb., 94(3):383-390 (1974) - (En); illustrations; chromosome numbers. 1

Holub, J. Petrodavisia, a new genus in Centaureinae (Asteraceae). Folia Geobot. Phytotax., 10(2); 191-196 (1975) - (Ge). 2

Johnson, M.F. Cynareae (Asteraceae) in Virginia: Arctium, Centaurea, Cnicus. Castanea, 40(1):63-73 (1975) - Dot maps; keys. 3

Lawalrée, A. Cirsium (Asteraceae) de Rona (Grisons, Suisse). Phytocoenologia, 2(1-2):22-27 (1975) - (En); map. 1

Moore, R.J. and Frankton, G. The thistles of Canada. Ottawa, Dept. of Agriculture, 1974. 111 p. (Research Branch Monograph no. 10)- Illustrations, dot maps; chromosome numbers; keys. 3

Namba, T., Kubo, M. and Mikage, M. (Studies on the medicinal resources from Taiwan: 3. On "Tai siau-ke"). J. Jap. Bot., 50(3):71-83 (1975) - Ja(En); illustrations. Cirsium. 2

Namba, T., Kubo, M. and Mikage, M. (Studies on the medicinal resources from Taiwan: 4. On "Thóng-thian-chhó"). J. Jap. Bot., 50(6):180-189 (1975) - Ja (En). Cirsium. 2

Pop, I. Studium über die Taxonomie, Chorologie und Zönologie der Art Centaurea atropurpurea W. et K. Phytocoenologia, 2(1-2):49-53 (1975) - (En); dot map. 1

Rechinger, K.H. Centaurea prespana, eine neue gelbblühende Art aus der Sektion Acrolophus. (Centaurea prepana, a new, yellow-flowered species of the section Acrolophus). Ann. Mus. Goulandris, 2:55-58 (1974 publ. 1975) - (En, Gre); illustrations. 1

Satomi, N. (Icones plantarum Hokurikuensium: 28). J. Geobot., 22(2):viii(1974)- Ja, En; illustration. Cirsium matsumurae. 2

Talavera, S. Contribucion al estudio cariologico del genero Cirsium en la Peninsula Iberica. Lagascalia, 4(2):285-296 (1974) - (En); chromosome numbers. 1

Watson, A.K. and Renney, A.J. The biology of Canadian weeds: 6. Centaurea diffusa and C. maculos Canad. J. Pl. Sci., 54(4):687-701 (1974) - (Fr); illustrations, dot maps; chromosome numbers. 3

Werner, K. Flora Europaea: notulae systematicae ad floram Europaeam spectantes: no. 16. Compositae (243) Cirsium Miller. Bot. J. Linn. Soc., 70(1):18-19 (1975). 1

MUTISIEAE

Cabrera, A.L. Una nueva especie de Onoseris (Compositae) de Brasil. Bol. Mus. Bot. Mun. (Curitiba), no. 19. 4 p. (1975) - Illustrations. 4

Crisci, J.V.
A numerical-taxonomic study of the subtribe Nassauviinae (Compositae, Mutisieae). *J. Arnold Arbor.*, 55(4):568-610 (1974) - Illustrations; chromosome numbers; key. 3,4

Koyama, H.
Notes on *Pertya hossei* and its allies. *Bull. Nation. Sci. Mus. B (Tokyo)*, 1(2):49-58 (1975) - Dot maps. 2,6

Lipshits, S. Yu.
Kriticheskii obzor novoi sektsii *Cincta* Lipschitz roda *Saussurea* DC (Compositae). (Critical review of the new section *Cincta* Lipschitz of the genus *Saussurea* DC. (Compositae)). *Bot. Zhurn.*, 60(7):944-947 (1975) - Illustration; key. 2,6

Ricardi, M. *and* Weldt, E.
Revision del genero *Polyachyrus* (Compositae). *Gayana*, no. 26. 34 p. (1974) - (Ge, En); illustrations; key. 4

Zardini, E.M.
Sobre la presencia del genero *Gerbera* en America. (About the presence of the genus *Gerbera* in America). *Bol. Soc. Argent. Bot.*, 16(1-2):103-108 (1974) - (En); illustrations. 4

LACTUCEAE

Alam, S.
Morphology, cytology, crossability and herbicide reaction of *Sonchus arvensis* L., *S. oleraceus* L., and their hybrids. *Bangladesh J. Bot.*, 1(1-2): 179-184 (1972) - Illustrations; chromosome numbers. 1-7

Doll, R.
Cytotaxonomisch Beiträge zur Taraxacum - Flora der Türkei. *Pl. Syst. Evol.*, 123(3):199-212 (1975)-(En); illustrations, dot maps; chromosome numbers. 2

Duvigneaud, J.
Remarque au sujet de l'orthographe de certaines épithetes spécifiques d'*Hieracium*. *Soc. Ech. Pl. Vasc. Eur. Occid. Bassin Médit. II Bull.*, fasc. no. 15:129 (1974). 1

Edmondson, T. *and* Mills, J.N.
Notes on *Hieracium* from Flint and eastern Denbigh. *Watsonia*, 10(3):286-287 (1975). 1

Estes, J.R. *and* Thorp, R.W.
Pollination ecology of *Pyrrhopappus carolinianus* (Compositae). *Amer. J. Bot.*, 62(2):148-159 (1975) - Illustrations, dot map. 3

Hackney, P.
Taraxacum records from Down (H38) and Antrim (H39). *Irish Nat. J.* 18(6):194 (1975). 1

Hagendijk, A., Soest, J.L. van *and* Zevenbergen, H.A.
Neue Taraxacumarten der Niederlande: 3. *Acta Bot. Neerl.*, 23(4):439-459 (1974) - (En); illustrations, dot maps. 1

Huber-Morath, A.
Hieracia Helvetica: 4. *Bauhinia* 5(2):69-93 (1975). 1

Khalnuziev, P.
Novye vidy flory shakhimardana. (Species novae florae Schachimardanicae). *Bot. Mater. Gerb. Inst. Bot. Akad. Nauk Uzb. SSR*, 19:58-61 (1974). *Lactuca.* 2

Lack, H.W.
Die Gattung *Picris* L. sensu lato im ostmediterran-westasiatischen Raum. Wien, VWGÖ, 1974. 184 p. (Dissertationen der Universität Wien, 116) - Illustrations, maps. 1,2

Lack, H.W.
A note on *Helminthotheca* Zinn. (Compositae). *Taxon*, 24(1):111-112 (1975). 1,2

Lack, H.W.
Type specimens of the Linnaean
species of Picris L. (Compositae).
Taxon, 24(1):113-116 (1975) -
1,2 Illustration.

Lambert, D.S.
Taraxacum records from Down (H38)
and Antrim (H39). Irish Nat. J.,
1 18(6):195 (1975).

Mahler, W.F.
The distribution of Pyrrhopappus
rothrockii Gray (Compositae-
Cichorieae) in Texas. Southwest.
3 Nat., 20(1):139 (1975).

Matthews, V.A.
A new species of Reichardia.
Notes Roy. Bot. Gard. Endinburgh,
34(1):125-127 (1975) - Illustra-
2 tions.

Nordenstam, S. and Soest, J.L. van
Taraxacum leporinum spec. nov.
Bot. Notiser, 127(4):490-492 (1974)-
1 En; illustration.

Parker, J.S.
Aneuploidy and isolation in two
Hypochoeris species. Chromosoma,
52(1):89-101 (1975) - Chromosome
1 numbers. H. glabra and H. radicata.

Pittoni, H.
Leontodon-Arten der Steiermark -
Bestimmungsmerkmale und Verbrei-
tung. Notizen Flora Steiermark,
nr. 1:13-20 (1974) - Illustrations,
1 dot maps.

Ponert, J.
Hieracium borckae Ponert -eine
neue Art aus der Turkei. Feddes
Repert., 86(1-2):39-41 (1975) -
2 (En, Rus).

Price, H.J.
DNA content and evolution in the
Microseridinae. Amer. J. Bot.,
62(3):262-267 (1975) - Chromosome
3 number.

Retz, B. de.
Remarques sur quelques Hieracium
distribués dans le fascicule: 15.
Soc. Ech. Pl. Vasc. Eur. Occid.
Bassin Medit. II Bull., fasc. no.
1 15:113-128 (1974).

Roberts, R.H. and Stirling, A. McG.
Taraxacum palustre (Lyons) Symons
in Anglesey. Watsonia, 10(3):292
1 (1975).

Sahlin, C.I.
Some new Taraxaca from the
Mosel Valley. Svensk Bot. Tidskr.,
69(2):161-174 (1975) - Illustra-
1 tions. Taraxacum.

Scannell, M.J.P.
Taraxacum gotlandicum (Dahlst.)
Dahlst., and other species in
Ireland. Irish Nat. J., 18(6):
1 195 (1975).

Shlyakov, R.N.
Novȳe vidȳ roda Hieracium L.
s. str. iz evropeiskoi chasti
SSSR i s Urala. (Generis Hieracium
L. s. str. species novae e parte
europaea URSS et montibus Uralen-
sibus). Novosti Sist. Vȳssh. Rast.,
1, 2 12:252-259 (1975).

Singh, G., Misri, B. and Kachroo, P
Achene morphology: an aid to
taxonomy of Indian plants: 1.
Compositae, Liguliferae. J.
Indian Bot. Soc., 51(3-4):235-242
6 (1972) - Illustrations; key.

Soest, J.L. van
Deux nouvelles espèces de
Taraxacum du Massif Central. Soc.
Ech. Pl. Vasc. Eur. Occid. Bassin
Médit. II Bull., fasc. no
1 115:111-112 (1974).

Stefanik, V.I.
Kariolochichnȳi analiz vȳdiv
rodu Leontodon L. florȳ Ukrayinȳ.
(Karyological analysis of species
from the genus Leontodon L. of
the flora of the Ukraine). Ukr.
Bot. Zhurn., 32(1):118-120. -
1 (En); chromosome numbers.

New York Botanical Garden Library
3 5185 00288 3963

Sutter, R.
Zur Verbreitung und soziologischen
Bindung von *Taraxacum braun-
blanquetti* van Soest und einiger
weiterer seltener Arten im
Département Hérault (Südfrankreich).
Phytocoenologia, 2(1-2):40-48 (1975)
1 - (En, Fr); illustration, dot maps.

Vasil'ev, V.N.
Serii (ryadӯ) roda *Picris* L.
(Compositae) vo flore SSSR.
(Series (rows) of the genus *Picris*
L. in the flora of the U.S.S.R.)
1,2 *Bot. Zhurn.*, 60(4):509 (1975).

HE OHIO STATE UNIVERSITY
DEPARTMENT OF BOTANY
1735 NEIL AVENUE
COLUMBUS, OHIO 43210

COLUMBUS OHIO
U.S. POSTAGE
10
PB METER
P.B. 304565

Mr. Charles R. Long
Chief Librarian
The New York Bot. Garden
Bronx, N.Y. 10458

RINTED MATTER